

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of identifying one or more substances having affinity for a given target substance, comprising:

- (i) providing a set of particle classes, each said particle class being distinguishable from other classes within the set by at least one physical property, each particle class being comprised of at least two sub-classes, wherein each sub-class is distinguishable from the other sub-classes of said particle class by a physical property, which is different from the property which distinguishes the particle class from other classes within the set, and further wherein each sub-class contains particles having at least one of said one or more substances attached to the surface thereof as a ligand, said ligands being different from ligands attached to particles of other particle classes or sub-classes;
- (ii) combining a plurality of classes or sub-classes to form at least one mixture,
- (iii) distributing said at least one mixture in separate vessels;
- (iv) exposing said mixture in said separate vessels to said target substance;
- (v) removing all target substance not having bound to any ligand; and

~~(iv)~~(vi) identifying to which particle classes or sub-classes said target substance actually has (have) bound, by identifying in which vessel or vessels target substance has bound to particles in the mixture present in said vessel or vessels, identifying to which particle class said target substance has bound; and identifying to which particle class or sub-class said target substance has bound.

Claim 2 (previously presented): The method of claim 1, wherein each particle class is characterized by one of the physical properties selected from the group consisting of size, density, color and shape.

Claim 3 (previously presented): The method of claim 2, wherein each particle sub-class is characterized by one of the physical properties selected from the group consisting of size, density, color and shape, but is difference from the property characterizing the particle class.

Claim 4 (previously presented): The method of claim 1, wherein the mixtures are formed by mixing two particle classes or sub-classes in a ratio such that the difference in the relative amount of each class or sub-class can be used to determine the particle class to which the target substance is bound.

Claim 5 (previously presented): The method of claim 1, wherein the target substance is marked so as to be detectable.

Claim 6 (previously presented): The method of claim 5, wherein the target substance is marked by attaching a moiety selected from the group consisting of a fluorescent moiety, a radioactive moiety, a colored moiety.

Claim 7 (previously presented): The method of claim 5, wherein the target substance reacts with the ligand to which it binds to provide a detectable effect, such as fluorescence or color.

Claim 8 (previously presented): The method of claim 1, wherein the identification is performed by ocular inspection under microscope.

Claim 9 (previously presented): The method of claim 1, wherein the identification is performed by image analysis with a computer.

Claim 10 (previously presented): The method of claim 1, wherein said mixture is exposed to at least two target substances.

Claim 11 (withdrawn): A library of different ligands, comprising particles belonging to a plurality of particle classes, each particle class being distinguishable from the other particle classes by at least one physically distinguishable property, each particle class being comprised of at least two sub-classes, wherein each sub-class is distinguishable from the other sub-classes by a physical property of the particle class from the property which distinguishes the particle class from other classes within the set, and further wherein those particles belonging to the same sub-class having at least one type of ligand attached to their surface.

Claim 12 (withdrawn): The ligand library of claim 11, wherein one of said properties of the particle classes or sub-classes is the size of the particles.

Claim 13 (withdrawn): The ligand library of claim 11, wherein one of said properties of the particle classes or sub-classes is the density of the particle.

Claim 14 (withdrawn): The ligand library of claim 11, wherein one of said properties of the particle classes or sub-classes is the shape of the particle.

Claim 15 (withdrawn): The ligand library of claim 11, wherein one of said properties of the particle classes or sub-classes is the color of the particle.

Claim 16 (withdrawn): The use of a ligand library as claimed in claim 11 for screening purposes.